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Higher Education and Funding

Funding of Higher education has become a major issue on the agenda of higher education institutions as the share of higher education in state budgets keep decreasing in the last three decades all over the world.

This problem is even more serious as the universities are predominantly government-owned institutions and rely on government funding for most of their income in Europe.



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Lisbon Strategy, 2000

The EU set itself “ a new strategic goal for the next decade: to become the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion.

Lisbon and Beyond

Meeting the goals of the Lisbon Agenda, it is crucial

- to increase the financial resources (3% GDP)
- to increase the number of researchers (training of researchers)
- to establish centers of excellence (formula funding)
- to make the Europe the most attractive place for the best brains of the world
- to establish strong links with industry to create better job opportunities

Public Funding

- The government allocates funds on the basis of previous years' budgets and adds or deducts incremental changes. State-oriented systems have the tendency to conserve structures and be less innovative and less responsive to changes in demand.
- Over the last three decades public pressure has forced governments in many western countries to look for ways to meet society's needs without spending too much taxpayer-generated money. One way to respond to these pressures is to link funding to performance.

Public Funding Systems

- **The Centralised Archetype:** Top down priority setting from ministry/central government, funding streams directly to public research institutions and universities, no independent funding agencies. (e.g., Italy)
- **The Dual System Archetype:** Federal and regional structure and ministers, both bottom up and top down practice, a mix of direct funding for public research institutions and universities and competitive grant programmes offered by independent funding agencies. (e.g., Germany, France, UK, Sweden, The Netherlands, Switzerland)

Public Funding Systems

- The Decentralised Archetype: Multiple ministerial research responsibilities, a primarily bottom-up agenda setting, mostly project funding via competitive grants from independent agencies. This model seems to be the least represented system in Europe.

Conraths, B., Smidt, H., "Funding of University-based Research and Innovation in Europe", EUA, 2005

Public Funding

As the pre-ordained structure of **line-item budgets** has begun to disappear, the need arises to find a basis on which to determine

- **the new block grants** or
- **lump-sum allocation**

that universities are to receive under more open and autonomous funding arrangements.

The search for this basis has led to a variety of “formulas” that are used to compute the funds that a university is expected to need

Weiler, H., 2000

Public Funding

- Many governments use competitive elements in the process of allocating public funds to institutions of higher education.
- Examples include the implementation of performance measures through “**formula funding**”, or resource allocation on the basis of evaluated project proposals.
- Corresponding forms of “**performance based**” resource allocation can be found within most higher education institutions.

Liefner, I., 2003

Performance Based Funding

- The performance based funding tends to bring about positive changes but it also a factor in unintended side effects.
- Forms of resource allocation influence the behavior of academics and managers in higher education, particularly their level of activity as well as the kinds of activities they engage in and their way of dealing with risks.
- Changes in resource allocation have an impact on the level and type of activity academics concentrate on but not on the long-term success of universities.

Quality - Funding

Quality of Higher Education in the face of Funding Deficiency

A. interms of quality of educational programmes

- Retention rate
- Student progress rate
- Full-time employability rate of graduates
- Completion rates
- Good teaching rate
- Generic skills rate



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Quality - Funding

B. in terms of research performance

- Research funding earned
- Research output

C. in terms of total service

- Overall satisfaction

Zhao, F., 2001

Initially the formulae for funding higher education have focused

- on **input factors**, i.e. on those indicators that represent the tasks universities are supposed to perform in teaching and research and their estimated costs
- on **the output side**, the choice of a few key indicators included in the formula becomes more difficult, especially since this also depends on what a given institution, by the nature of its institutional mission, considers particularly important.

Weiler, H., 2000

Public Funding

Changing in funding models, that is, shifts in income sources, or in the forms of resource allocation will likely have major impact on the behavior of universities as well as their internal process of resource allocation.

Changes in resource allocation also affect

- The way of using resources / Project Management
- The structuring of Projects
- Behavior of individual faculty responsible for teaching and research
- Long term success of a university

External funding

The growing shortage of public funds, combined with the desire for getting away from the state as the sole source of a university's funding, has contribute to an unprecedented preoccupation in European higher education with opening up additional and alternative funding.

External funding

This effort takes the form of seeking support

- from organized philanthropy through foundations,
- of a growing volume of contractual research and training programmes for clients,
- of sale of services such as language teaching or the use of libraries and data networks,
- the mobilization of private individual and corporate donors to set up endowment
- funds for special projects (such as endowed chairs),
- programmes of continuing education, and others,

External Funding

In fact, diversified funding leads to a diverse system of management and delivery.

- To accommodate the different influences imposed by the suppliers of different sources of income and compete for funding from every potential source of income require more sophisticated of management to deliver a more complex array of services.

Zhao, F., 2001



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What are the problems of external funding?

- Sustainability of external funding
- Hidden cost of external funding (erosion of basic capabilities in libraries, laboratories..)
- Impact of external funding on institution's mission and intellectual profile

External Funding

Students and sponsors influence on quality of higher education

On the positive side,

- Increasing non-Government funding promotes institutional autonomy and restricts Government influence on universities to some extent.
- The search for alternative sources for funds impelled universities to be more responsive to the viability of the local economy and and the market.

Zhao, F., 2001

External Funding

On the negative side,

- Institutional autonomy and academic freedom are inevitable challenged in the course of diversification as funding resources often have a powerful influence on the way resources are used and on institutional priorities.
- There have been clearly expressed concerns of university administrators, scientists and academics about the problem of increasingly relying on students and industry funding.

Zhao, F., 2001

CASE STUDY : Istanbul Technical University

ITU is a state university.

Therefore

- The majority of its funds is public fund.

Other resources (before 1996)

- Revolving Fund for contractual R&D projects(8-10%)
- Student Fees (5%)

CASE STUDY : Istanbul Technical University

- ITU has realized extensive reforms on its teaching, research and services to industry to be on the forefront of knowledge creation and compete world-wide.
- For this very ambitious mission additional and alternative funding became “must” at the beginning of this process.

CASE STUDY : Istanbul Technical University

- First of all existing funding system was analyzed and restructured to design efficient, effective strategies for allocation of resources in ITU
- Tools are developed to synchronize the reforms and the funding system to realize the mission
- Tools for estimating financial needs according to changing conditions have been developed
- The amount of Financial resources needed to realize reforms have been defined for the first and second four year periods by the strategic plans

Seeking for Additional Public Funding

- Line item budget
- Block Funding (Research Funding) SPO
- Formula Funding (Centers of Excellence) SPO

Public funding has been threefold (1996-2004)

Research funding has been tenfold

Number of research projects threefold

Number of published papers twofold

Generation of New Resources in the State System

- Restructuring Revolving Fund
- Income from Land and Buildings
- Starting new graduate programmes (payed)
- Starting new undergraduate programmes (payed)
- Establishment of a new unit (tax free) for the management of facilities
 - Cafes
 - Kiosks
 - Restaurants



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Foundations have been activated for

- **Fund raising from alumni and industry for**
 - New establishments and Investments
 - Scholarship programmes
 - International Activities
 - Awards
 - Funding Graduate Programmes

- **Establishment of R&D Company**
 - Research funding from Industry
 - Research Funding from State



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Foundations have been activated for

- **The establishment of a Company for Training Professionals**
 - IT based courses
 - Management / Business related Courses
 - Language Courses
 - Tailored Courses



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Foundations have been activated for

- **The establishment of a company for the management of Facilities**
 - Student Residences
 - Nursery
 - Primary School
 - High School
- **The establishment of ARI Techno-city**



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Management of Mixed Resources

- Establishment of Project Management Center
- Changing the Culture of Project structuring to create more
 - Flexible
 - Adaptable
 - Transparent
 - Modular structure
- Changing the management Culture
 - From Vertical
 - To Horizontal Structure



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Continious Quality Improvement

- **Establishment of self Evaluation Systems**
- **International Accreditation**
- **Institutional Evaluation (EUA)**
- **Raising Academic Promotion Criteria**
- **Performance Based Research Funding**
- **Incentives for research and teaching achievements**

CASE STUDY : Istanbul Technical University

Between 1996-2004

Unprecedented 140 m USD additional funding for investments obtained from the state and alumni resources outside regular budget.

Case Study: ITU

- Gaining Visibility at National and International Levels
- Establishing Continuous Quality Improvement Systems
- Achieving International Accreditation
- Creating adaptable, flexible and transparent structure
- Being a part of National and International Networks
- Activating International Relations
- Organizing Public Relation Activities

Opened up new opportunities for external funding at national and international levels



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Case Study: ITU

- State Budget
- Income Generation
- External Funding (National)
- External Funding (International)

Conclusion

- Public Funding keep decreasing for HE
- Additional and Alternative Funding is” must”
- New generation management systems are essential
- Performance based resource allocation has a vital role
- Management of mixed funding is important
- Change is permanent
- Uncertainty is here to stay
- Adaptability is key for success
- **Success is a journey not a destiny** (H.T.Collard)



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Thank You